HP Service Manager Mobile Applications

Software Version: 9.40
For the supported Windows® and Linux® operating systems

User Guide

Document Release Date: December 2014
Software Release Date: December 2014

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Chapter 1

Getting started with HP Service Manager Mobile Applications

The field engineers are typically tasked to work with business users at a customer site, and they spend most of their time away from the office to resolve tickets. When Change Approvers are away from the office, they need a way to quickly approve or deny changes, so that pending work orders can be assigned. Service Manager Mobile Applications connect your company's people and information by providing your team access to the Change Management, Incident Management, and Service Desk applications through the use of smartphones. When these IT operators are away from the office, they can receive and view work assignments and perform the tasks below by using the Mobile Applications:

- Approve and deny change requests.
- Approve and deny interaction.
- Reassign incidents/changes to the proper support group.
- Search the knowledge base.
- Open a support ticket.
- Continue working on-site with customers.

These quick responses improve business metrics, as service level objectives are met.

This chapter includes:

- "Preparing to launch Service Manager Mobile Applications on your smartphone" below
- "Launching Service Manager Mobile Applications on your smartphone" on the next page
- "Using Service Manager Mobile Applications in power user view" on page 3
- "Using Service Manager Mobile Applications in self-service user view" on page 12

Preparing to launch Service Manager Mobile Applications on your smartphone

To prepare for launching Service Manager Mobile Applications on your smartphone, make sure:

1. Your touchscreen smartphone meets the requirements that are described in the Service Manager compatibility matrix. For details, see HP Support matrices.
2. Your smartphone browser conforms to the following configurations:
   - Cookies are enabled.
   - JavaScript is enabled.
   - Pop-ups are enabled. At a minimum, add the Service Manager Mobile Applications host name to the pop-up exception list.
3. Your System Administrator has provided you with the web URL needed to access the Service Manager server from the Mobile Applications.

   Power user view: http://<*servername*>:<*portnumber*>/<*appname*>/std/ (/std/ can be omitted)

   Self-service user view: http://<*servername*>:<*portnumber*>/<*appname*>/ess/ (/ess/ cannot be omitted)
4. You have a valid Service Manager username and password.

Launching Service Manager Mobile Applications on your smartphone

User role: IT Operator

To launch Service Manager Mobile Applications on your smartphone, follow these steps:

1. In the web browser on your smartphone, type the Service Manager Mobile Applications web URL provided by your System Administrator. The Login page opens.
2. On the Login page, type your user name and password. The user name is auto-filled in the login screen the next time you log in.
3. Tap the **Language** field and scroll down to select your preferred language from the list, and then tap **Done**. The language defaults to your settings on Service Manager.

   Note:
   - Service Manager 9.40 Mobile Applications does not support right-to-left displayed languages such as Arabic and Hebrew.
   - Available languages are retrieved from the Service Manager server. Only when your Service Manager server has a language pack installed, the corresponding language appears in the language selection list.

- If you clear your browser cookies from the smartphone, you need to type your user name and select the preferred language again the next time you log in.

4. Tap **Login** to log on to Mobile Applications.

Note: Service Manager Mobile Applications supports multi-tenancy mode.

Using Service Manager Mobile Applications in power user view

The Service Manager Mobile Applications power user view is intended for Service Desk technicians, managers, and provides various views for the following tasks:

- "Understand the views within Service Manager Mobile Applications" below
- "Manage user interactions" on page 6
- "Manage incidents" on page 8
- "Manage changes" on page 10

Understand the views within Service Manager Mobile Applications

After you logged in to Service Manager Mobile Applications, the default view is displayed depending on your user role. Service Manager Mobile Applications provides the following default views to access individual and group assignments and enables you to address any critical and pending issues that need immediate attention. If you are a Change Approver, you will also see change requests waiting for your approval.

Service Manager Mobile Applications Default Modules and Views

Module	View
Incident	• Assigned to Me • Assigned to My Groups
Change	• Awaiting My Approval • Assigned to My Groups

Service Manager Mobile Applications Default Modules and Views, continued

Module	View
Interaction	• All My Interactions • Awaiting Approval
Approval[1]	• My Pending Approvals • My Pending Delegated Approvals

[1]As of version 9.40, Mobile Applications provides additional approvals for time periods and requests (for Service Manager Codeless).

List view

Being the default home page after you log on to Service Manager Mobile Applications, the List view enables you to navigate through lists of Incidents and Change requests. In the List view, you can perform the following tasks:

- Switch between different modules (Incident, Change, Interaction and Approval).
- Switch between different list views (For example, Assigned to Me, Assigned to My Groups, and so on).
- Scroll vertically through a list of records.
- Search for specific incidents, change requests and interactions by record ID.

Common tasks in the List view

Refer to the following content for some common user tasks in the List view.

- **To switch between different modules:**

  Tap the Module icon at the top and select other categories from the list. The default categories includes **Incident**, **Change** and so on.

- **To switch between different list views:**

  Refer to the Incident module as an example. Tap **Assigned to My Groups** at the top and scroll down to select **Assigned to Me** and so on from the list.

  > **Tip:** For more information about how to add views on Mobile Applications client, see "Add a view for Mobile Applications" on page 21.

- **To access the Detail view of a record:**

When navigating through the records list, tap a record to access its Detail view.

- **To search for specific incidents and change requests by record ID:**

  a. Tap the Magnifier icon at the top. A Search field opens.

  b. In the Search field, type the `IM` or `C` prefix with ID of the incident record or change request. For example: `IM10002` or `C10003`.

  c. Tap **Enter**. The specific incident record or change request opens in the Detail view.

  Note:
  - When using the search function, make sure the prefix of the incident record or change request aligns with those in your Service Manager environment. For example, `C` is the prefix for a change request. For more information about how to configure the prefix of an incident record or a change request, see "Configure the prefix of a record" on page 19.
  - Service Manager Mobile Applications supports wildcards in the Search field. If you type `IM1000*` and then tap **Enter**, the multiple search results will be displayed as a list of Incident records.

- **Tap the Ellipsis icon at the top** and select corresponding option in the list opened to:
  - View or clear system messages for the current user
  - Log out of the mobile session
- **Tap the floating action bar** and select corresponding option in the list opened to:
  - Refresh the current page
  - Sort the records in the List View

Detail view

The Detail record view enables you to view or update the details of a record. In the Detail view, you can perform the following tasks:

- Browse the summary information and the updates of a record.
- Update the editable fields of a record (for example, Description, Status, Affected Service/CI).
- Reassign a record (update the Assignee and Assignment Group).
- Use the click-to-dial functionality and the click-to-email functionality. For example, if a field engineer wants to notify a customer that he is going to stop by, he can drill into the contact information of a record and use the single-click method to call or email the customer.

Common tasks in the Detail view

Refer to the following content for some common user tasks in the Detail view.

- **To access the List view of a record:**

  When navigating through detailed records, you can tap **Back** to go back to the List view.

- **Tap the tabs** at the top to display the detailed information of a record.
- **Tap the Fill icon** to update the editable fields of a record (for example, Status, Affected Service/CI, Assignee/Assignment Group).
- **Tap the bulb icon** in the contact information of a record, and then tap the telephone number to use the click-to-dial functionality. The dial dialog box will open.
- **Tap the bulb icon** in the contact information of a record, and then tap the email address to use the click-to-email functionality. The email application embedded in your smartphone opens.
- **Tap the Ellipsis icon at the top** and select corresponding option in the list opened to:
  - View or clear system messages for the current user.
  - Log out of the mobile session.
- **Tap the floating action bar** to display the options that you can perform on the current record.

Manage user interactions

After a user contact with the Service Desk is logged as an interaction, User Interaction Management provides the Service Desk Agents the ability to perform the following tasks from their smartphones:

- Browse and review interactions.
- Approve, deny or close an interaction.
- Update interactions. For example, a field engineer can update the details and add an activity (or journal entry) update to an interaction record.
- Approve or deny a Service Catalog request.

Update an open interaction

User role: Service Desk Agent

To update an open Service Desk interaction, follow these steps:

1. Tap the Service Desk interaction record you want to update. The Detail view of this record opens.
2. In the **Interaction Details** tab, update the request details as needed.
3. Tap the **Updates** tab.
4. In the **New Update Type** field, scroll up or down to select a type, and then tap **Done**.
5. In the **New Update** field, add the details for the new activity (or journal entry).
6. Tap **Save** from the action bar to save the record.

The details of the new activity entry will become available for customer viewing on your customer support portal.

Approve or deny an interaction

User role: Service Desk Agent

When an order is submitted from Service Desk, Service Manager automatically creates an interaction that, based on approval requirements, may have to be approved before its fulfillment or to be denied.

To process an interaction, follow these steps:

1. Tap a Service Desk interaction record from the **Awaiting Approvals** view. The Detail view of this record opens.
2. Review the Service Desk interaction and determine how you will process the approval interaction.
3. To approve an Service Desk interaction, tap **Approve** from the Ellipsis icon options.

   The record is now approved and disappear from the view list.
4. To deny an Service Desk interaction, follow these steps:
   a. Tap **Deny** from the action bar.
   b. Type the reason you are denying the request, and then tap **Save**.

   The record is now denied and disappears from the view list.

Close an interaction

User role: Service Desk Agent

You can close an existing Service Desk interaction if the user accepts the proposed solution. If you or the user disagree with the proposed solution, you need to resubmit the related incident for further investigation.

To close an existing Service Desk interaction, follow these steps:

1. Tap the Service Desk interaction record you want to close. The Detail view of this record opens.
2. Tap the Fill icon in the **Contact** field to determine which user will be notified of the solution.
3. If necessary, update the **Notify By** field to determine how the user will be notified.
4. Tap on the Fill icon in the **Closure Code** field to select a closure code.
5. Type the solution in the **Solution** field.
6. Tap **Close Interaction** from the action bar. The status of this interaction record changes to Closed.

Approve or deny a Service Catalog request

User role: Service Catalog approver

When an order is submitted from Service Catalog, HP Service Manager automatically creates an interaction that, based on approval requirements, may have to be approved before its fulfillment or to be denied.

To process a Service Catalog request, follow these steps:

1. Tap a request record from the My Pending Approvals view. The Detail view of this record opens.
2. Review the request and determine how you will process the approval request.
3. To approve a Service Catalog request, tap **Approve** from the action bar.

   The record is now approved and disappear from the view list.

   > **Note:** You can also approve delegated approvals from the **My Pending Delegated Approvals** view.

4. To deny a Service Catalog request, follow these steps:
   a. Tap **Deny** from the action bar.
   b. Type the reason you are denying the request, and then tap **Save**.

The record is now denied and disappear from the view list.

Manage incidents

When incidents are escalated from Service Desk interactions, opened by support staff, or reported by event monitoring tools, Incident Management provides the Incident Management staff the ability to perform the following tasks from their smartphones:

- Browse and review incidents.
- Assign or reassign an incident.
- Investigate incidents.
- Update incidents. For example, a field engineer can add an activity (or journal entry) update to an incident record and set the customer-visible flag to make the update available for customer viewing on the customer support portal.
- Resolve or close a ticket. When a field engineer attempts to resolve or close an incident, HP Service Manager determines the business logic and displays Resolve or Close accordingly.

Set the customer-visible flag for an incident's activity

User role: IT Operator

When you want to publish the activity (or journal entry) details of an incident for customer viewing, you can set the customer-visible flag in a new activity entry.

To set the customer-visible flag in a new activity (or journal entry) entry, follow these steps:

1. Tap the incident record you want to resolve. The Detail view of this record opens.
2. Tap the **Updates** tab.
3. In the **New Update Type** field, scroll up or down to select a type, and then tap **Done**.
4. Tap to highlight the check mark in the **Visible to Customer** field.
5. In the New Update field, add the details for the new activity (or journal entry).
6. Tap **Save** from the action bar to save the record.

The details of the new activity entry will become available for customer viewing on your customer support portal.

Reassign an incident

User role:Incident Analyst, Incident Coordinator, Incident Manager

At times you will need to reassign incident records when an Incident Analyst is unavailable.

To resolve an incident, follow these steps:

1. Tap the incident record you want to resolve. The Detail view of this record opens.
2. Tap the Fill icon in the **Assignee** field, and then select an operator from the list of names to

reassign the incident to that person.

3. Tap **Save** from the action bar to save the record.

Resolve an incident

User role:Incident Analyst, Incident Coordinator, Incident Manager

To resolve an incident, follow these steps:

1. Tap the incident record you want to resolve. The Detail view of this record opens.
2. Tap the arrow icon in the **Status** field, and then tap **Resolved** to close the incident record.
3. Tap the Fill icon in the **Closure Code** field to select a closure code.
4. Type the solution in the Solution field.
5. Tap **Close Incident** from the action bar. The status of this incident record changes to Closed.

Manage changes

When a change request is logged, the Change Analyst assesses the change request, implements a plan for delivering the change, and then notifies the Change Coordinator as to the impact of the change. The change request is then submitted for Change Approver, or Change Advisory Board (CAB)'s approval. Service Manager Mobile Applications provide the Change Management staff the ability to perform the following tasks from their smartphones:

- Review change requests.
- Approve or deny changes.
- Coordinate change implementation.
- Handle emergency change requests.
- Assign or reassign change requests.
- Add activity (or journal entry) entries.
- Review change requests.

An example of a change approver's possible actions for a change record include approving or denying change requests. To deny a pending change request, a Change Approver may do the following:

- Drill down into a single record.
- Deny the ticket.
- In the Update field, type detailed notes about the denied request.

Users can also drill down to the details of a field within a record. For example, if a Change Management staff wants to add an activity (or journal entry) update to a change request, he/she nay do the following:

- Search for the change record.
- Drill down into the record's activities.
- Add the necessary activity update.
- Make any other necessary changes.

Set the customer-visible flag for a change's activity

User role: All users

When you want to publish the activity (or journal entry) details of a change for customer viewing, you can set the customer-visible flag in a new activity entry.

To set the customer-visible flag in a new activity (or journal entry) entry, follow these steps:

1. Tap the change record you want to resolve. The Detail view of this record opens.
2. Tap the **Activities** tab.
3. In the **New Update Type** field, scroll up or down to select a type, and then tap **Done**.
4. Tap to highlight the check mark for the **Visible to Customer** field.
5. In the **New Update** field, add the details for the new activity (or journal entry).
6. Tap **Save** from the action bar to save the record.

The details of the new activity entry will become available for customer viewing on your customer support portal.

Approve, deny or retract a change

User role: Change Approver

You can approve or deny a change that is pending approval only if you are a member of the necessary approval group and you are assigned the appropriate Change Management user profile. You can also retract a change that has been previously approved or denied, if you are unwilling to commit resources or know of technical incidents that affect the request.

To process a change approval request, follow these steps:

1. Tap a change record from the **Awaiting My Approval** view. The Detail view of this record opens.
2. Review the change information and determine how you will process the approval request.
3. To approve a change, tap **Approve** from the action bar.

   HP Service Manager changes the Approval Status to approved, and the Change Manager updates the change and passes it to the Change Coordinator for implementation.
4. To deny a change, follow these steps:

   a. Tap **Deny** from the action bar.

   b. Type the reason you are denying the change, and then tap **Save**.

   Service Manager changes the Approval Status to denied, and no further approvals are possible until the denial is retracted.
5. To retract a change, follow these steps:

   a. Tap **Retract** from the action bar.

   b. Type the reason you are retracting the change, and then tap **Save**.

   Service Manager changes the Approval Status to pending, and the change request requires a new approval cycle to progress.

Using Service Manager Mobile Applications in self-service user view

The Service Manager Mobile Applications self-service user view is intended for end-users as an entry point to Service Desk and provides a simplified Service Desk interface for users to perform the following tasks:

- "Search the knowledge base" on the facing page
- "Submit a self-service request" on the facing page
- "Submit a smart request" on the facing page
- "View opened and closed tickets" on page 14
- "View, approve, or deny pending approval requests" on page 14

Search the knowledge base

User role: IT Operator

To search the knowledge base for your questions, follow these steps:

1. Type your issue and tap the magnifier icon to search the knowledge base.
2. Tap the result record and view the knowledge article. You can tap **Cancel** on the bottom to return to the search results.
3. If you like an knowledge article, tap .
4. To add feedback to the knowledge article, tap **Add Feedback**.

Submit a self-service request

User role: IT Operator

If you cannot find the knowledge article to address your issue, you can also submit a self-service request.

To submit a self-service request, follow these steps:

1. Tap **Open Ticket** on the bottom of the screen. You can also tap the menu icon , and then tap **Submit a Request** in the menu.
2. Type the required information for a support ticket, including title, description and urgency.
3. Tap + to attach a file as necessary. The supported file types including images (*.jpg, *.png, *.tiff and *.bmp) and PDF.

   Note: Attachment is not supported on BlackBerry 6.x, 7.0 and 7.1 devices.

4. Tap **Submit** to submit the request.

Submit a smart request

User role: IT Operator

If you have installed and enabled HP Service Manager Smart Analytics, **Submit a Smart Request** is automatically added to leverage the power of the Smart Ticket feature. You can tap **Submit a Smart Request** to open a new, simplified request form that only requires “description” or “attachment” to submit a request, which simplifies the process of submitting the ESS support requests.

To submit a smart request, follow these steps:

1. Tap **Open Ticket** on the bottom of the screen. You can also tap the menu icon ☰, and then tap **Submit a Smart Request** in the menu.
2. Tap + to attach an image file. For example, a screenshot of the error message.
3. (Optional) Type the comment for your request.
4. Tap **Submit** to submit the request.

Service Manager Smart Analytics will analyze your attached image file, fill in the necessary information automatically, and then generate the interaction directly.

Note: Submit a Smart Request is visible to self-service users only when Service Manager Smart Analytics is enabled. However, this option is visible to the administrator no matter Smart Analytics is enabled or not.

View opened and closed tickets

User role: IT Operator

To view your opened and closed tickets, follow these steps:

1. Tap **My Closed Ticket** or **My Opened Ticket** to view your submitted tickets.
2. Tap the record to view the content of a ticket.
3. You can update, close or resubmit the ticket by tap the buttons on the bottom of the screen.

View, approve, or deny pending approval requests

User role: IT Operator

Users with the self-service Approval menu is allowed to view, approve, or deny pending approval requests.

To view, approve, or deny pending approval requests, follow these steps:

1. Tap the menu icon ☰ and then tap **Pending Approval** to view your pending approvals.
2. Tap one record and then tap **View**, **Approve** or **Deny**.
3. If there are more than 10 pending approvals, tap the **More** button to view the records on the next page.

Chapter 2

System administration

This chapter provides details about how to install, implement and tailor Service Manager Mobile Applications to support your business processes.

This chapter includes:

- "Installing Service Manager Mobile Applications" below
- "Tailoring Mobile Applications in Service Manager" on page 18
- "Customizing the Service Manager Mobile Applications CSS" on page 25
- "Protecting communications between Mobile Applications and the Service Manager server" on page 30

Installing Service Manager Mobile Applications

This section provides details about how to install Service Manager Mobile Applications to support your business processes.

This section includes:

- "Before you start" below
- "Install Service Manager Mobile Applications" on the next page

Before you start

As the System Administrator, you must:

- Have already installed HP Service Manager 9.32 or later on a web accessible location. For installation information, see the *HP Service Manager Interactive Installation Guide* and the *HP Service Manager 9.40 Release Notes*.

  Note: For the Mobile Applications client, only the Service Manager 9.32 server and later versions are supported.

- Your Apache Tomcat web application server meets the requirements that are described in the Service Manager compatibility matrix. For details, refer to the Service Manager compatibility matrix at HP Support matrices.
- Install the Oracle Java SE Runtime Environment (JRE) 1.7 or later.
- Configure the JVM memory settings on the web application server as below:
  - Minimal setting: `-Xms:1024m, -Xmx:1024m, -XX:PermSize=256m`
  - Recommended setting: `-Xms:1500m, -Xmx:1500m`
- Set `JAVA_HOME` to the location where the JDK was installed.

  For example, use the following command on a 32-bit operation system:

  managesdk -enableProfileAll -sdkname 1.7_32 -enableServers
- Review the browser requirements for smartphones.
- Set up your Mobile Applications preferences.
- Configure Service Manager.

Install Service Manager Mobile Applications

When you have finished preparing for your installation (see Introduction to installing and configuring Service Manager Mobile Applications), you can perform the following tasks to install Service Manager Mobile Applications.

1. "Edit the configuration file in the war archive" below.
2. "Install Service Manager Mobile Applications" on the facing page.

Edit the configuration file in the war archive

To edit web.properties in webapp-9.40.xxxx.war, follow these steps:

1. Open webapp-9.40.xxxx.war in an archive management program.
2. Extract the web.properties file from the WEB-INF directory to your local system, and then open this file in a text editor.
3. Set the Service Manager server and port parameters as follow to add your server connection information:

Required parameters for Service Manager Mobile Applications client connection

Parameter	Default value	Description
endpoint	`http://localhost:13080/SM/ui`	Change `localhost:13080` to your Service Manager server host name and port number.
resourceRoot	None	This parameter is commented-out by default. You need to update this value only when the *.js image files and the *.css files are stored on another server. For example, if you moved the static files to another Apache server, change this value to `resourceRoot=http://<host name of another Apache server>:8080/mobile/statics/`.

Tip:
- Optionally, you can also define the number of records that appear in every page of the List View by configuring the value in the *recordlistcount* parameter.
- To support the FIPS (Federal Information Processing Standards) mode for Service Manager 9.32 and later versions, you need to specify the JCE provider name in the *JCEProviderName* parameter, and then specify the the JCE provider class name in the *JCEProviderClassName* parameter. Note that both parameter values are case-sensitive.

4. Save the file and add the updated file back to the WEB-INF directory of the webapp-9.40.xxxx.war archive.

Install Service Manager Mobile Applications

The Service Manager Mobile Applications contains a J2EE-compliant web application that runs on your web application server. Each web application server has its own method of deploying web applications. See your web application server documentation for specific instructions on deploying a web application.

Note: For the specific versions of the Apache Tomcat web application server that are currently supported by the Service Manager Mobile Applications client, refer to the Service Manager compatibility matrix at HP Support matrices.

The following table provides a summary of deployment methods required.

Web application server	Deployment method
Apache Tomcat	Copy the webapp-9.40.xxxx.war file to the <Tomcat>\webapps folder and start the web application server.

Note:

- If you are working with Service Manager 9.32 or later 9.3x version and are planning to upgrade both platform and applications to version 9.40, the Mobile Applications will be upgraded to the latest version which supports both power user view and self-service user view.
- If you are working with Service Manager 9.32 or later 9.3x version and are planning to upgrade only the platform to version 9.40, you can still use Mobile Applications in power user view. To use the self-service user view, you must apply the MOBILITY_ESS_SM940_SM932.unl file that is available in mobility-9.40.zip on Service Manager 9.40 DVD.

Tailoring Mobile Applications in Service Manager

When you have finished installing Mobile Applications, you can tailor the following in HP Service Manager:

- "Set up email notifications to include URL links" below
- "Configure the prefix of a record" on the facing page
- "Add a view for Mobile Applications" on page 21
- "Add a form for Mobile Applications" on page 23
- "Customize the fields on Mobile Applications form" on page 23
- "Customize the action bar options" on page 24

Set up email notifications to include URL links

The HP Service Manager System Administrator can set up email notifications to include the mobility URL so that when tickets are assigned, field engineers can receive email notifications and click on the URL links in the emails to go directly to the assigned ticket.

Service Manager Mobile Applications automatically synchronizes users' mobile data with information in the Service Manager database. When an email notification is sent to a field engineer, Service Manager Mobile Applications searches for the record by name and then displays it. If the record is not in the cached database, Service Manager will be queried to fetch the record.

To set up email notifications, follow these steps:

1. Restart the Service Manager Mobile Applications server.
2. Log on to the Service Manager server as a System Administrator.
3. Click **System Administration** > **Base System Configuration** > **Miscellaneous** > **System Information Record**.
4. Select the **Active Integrations** tab.
5. In the **Mobility URL** field, type the fully-qualified URL to the Service Manager server from the Mobile Applications client.

   For example: `http://<servername>:<portnumber>/<appname>/std/`

   Where:

   `servername` is the host name or IP address of the Service Manager server.

   `portnumber` is the port number. For example, `8080`.

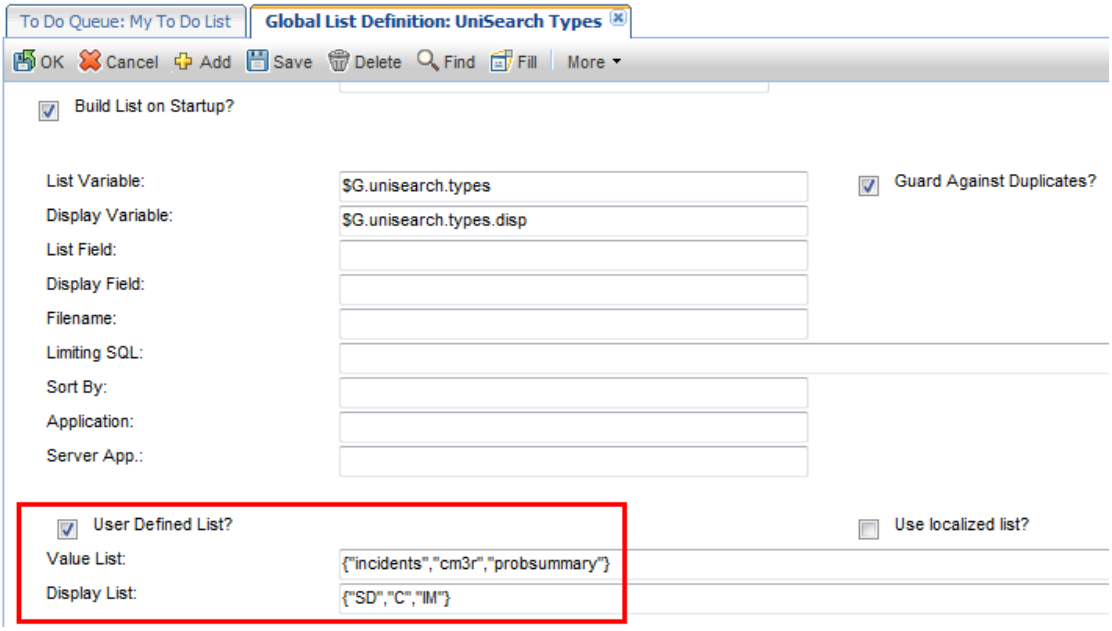
   `appname` is the name of the deployed Service Manager Mobile Applications client WAR/EAR file. For example, `webapp-9.40.xxxx.war`.

   The server stores the value of this field in the `$L.mobility.url` global variable.
6. Save your changes.

Configure the prefix of a record

To configure the prefix of an incident record or a change request which already has a prefix, follow these steps:

1. Log on to the HP Service Manager server as a System Administrator.
2. Type `gl` in the Service Manager command line field, and then press **Enter**.
3. Type `UniSearch Types` in the **List Name** field, and then click **Search**.
4. Verify and configure the values in the **Value List** field and the **Display List** field. Refer to the following screenshot as an example:

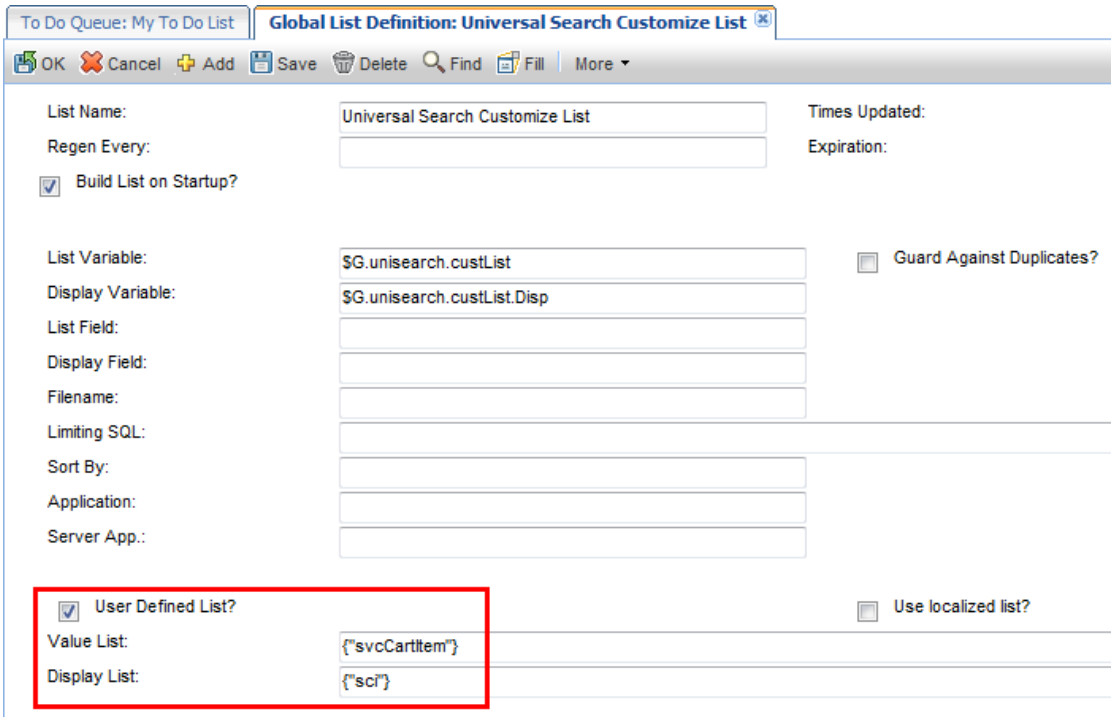


5. Click **Save**, and then click **OK**.

To configure the prefix of an incident record or a change request which does not have a prefix, follow these steps:

1. Log on to the Service Manager server as a System Administrator.
2. Type `gl` in the Service Manager command line field, and then press **Enter**.
3. Type `Universal Search Customize List` in the **List Name** field, and then click **Search**.
4. Add customized record type to the **Value List** field and then add the corresponding prefix to the **Display List**.

   Refer to the following screenshot as an example:



The out-of-the-box record is `svcCartItem` with the prefix `sci`. When you search for `sci1`, the svcCartItem record with the ID of 1 is displayed in the List view.

5. Click **Save**, and then click **OK**.

Add a view for Mobile Applications

Service Manager Mobile Applications provides several out-of-box views to access individual and group records. For example, the default views of Incidents are **My Group's Incidents** and **My Incidents**. As the system administrator, you can create more views for one or more users to customize the default log-on view. For example, if a group of users regularly searches on the same query, you can provide them with a shared query view as their default whenever they log on to Service Manager from the Mobile Applications client.

To display an existing view in the Mobile Applications client, follow these steps:

1. Log on to HP Service Manager using the Windows client as a System Administrator.
2. From the System Navigator, click **Favorites and Dashboards**.
3. Right-click the favorite that you want to edit, and then select **Properties**. The View Definition form opens.
4. Select the **Mobile Accessible** check box.
5. In the **Audience** tab, update the audience which are exposed to the view and then click **Save**.

Tip: You may need to configure the access to browse for certain views:

1. From the System Navigator, click **System Administration** > **Base System Configuration** > **Miscellaneous** > **View/Favorites**.
2. Select the view and click the **Audience** tab.
3. Select **Selected Groups** and update the Groups list.

To create a new view for the Mobile Applications client, follow these steps:

1. Log on to Service Manager using the Windows client as a System Administrator.
2. Click **System Administration** > **Base System Configuration** > **Miscellaneous** > **Views/Favorites**.
3. Click **New**. The New View wizard opens.
4. Select the Area to create the view in and then click **Next**.
5. Specify the name and type for the view you wish to create, and then click **Next**.
6. Select the fields you want in your view:
   a. Click **Fields**.
   b. To add fields, select items from the table menu and click **Add to List**.

   Note: If you select a field that has a link to another table, select from the secondary menu to add fields you want in the view.
7. Select properties for Group By, Sort By, Filter, and Autoformat as desired.
8. Click **Finish**.
9. Select the **Mobile Accessible** check box.
10. In the **Audience** tab, select an audience for the view and then click **Save**.
11. Open the To Do Queue, select the area in the Queue field as you defined in *step 4* and check which form is used by the new view.
12. Open Form Designer and search for the form.
13. Click **More Actions** > **Copy/Rename** to copy the form with a mobile suffix.

    Note: When copying the forms, do not omit the .g suffix which is used by some forms. For example, you can copy sc.manage.cmr.g to sc.manage.cmr.g.mobile.

To remove a view from the Mobile Applications client, follow these steps:

1. Follow *step 1* to *step 3* as described in "To display an existing view in the Mobile Applications client, follow these steps:".
2. In the **Audience** tab, update the audience which are to be excluded from the view; or you can clear the **Mobile Accessible** check box to remove the view from Mobile Applications.
3. Click **Save**.

Add a form for Mobile Applications

After you added a new view which enables you to navigate through lists of records, you need to add forms for these records in the List view.

To add a form for the Mobile Applications, follow these steps:

1. Log on to HP Service Manager using the Windows client as a System Administrator.
2. Select the area in the **Queue** field as you defined in *step 4* of "To create a new view for the Mobile Applications client, follow these steps:" on the previous page.
3. Select the view you created in the **View** field.
4. Open a record and check which form is used by the record .
5. Click **Tailoring** > **Forms Designer** and search for the form.
6. Click **More Actions** > **Copy/Rename** to copy the form with a mobile suffix. For example, you can copy IM.close.incident to IM.close.incident.mobile.

> **Note:** The form used by a record may vary with different status or phases of that record. You need to add a form for each status or phase respectively. For example, the form associates with an Incident can be either IM.close.incident or IM.update.incident. If you have made any omissions, the Mobile Applications client will automatically synchronize data with the original form in the Service Manager database after you logged on to the system.

Customize the fields on Mobile Applications form

For a better appearance of a record's Detail view on the screen of your smartphone, you may need to add, rearrange or remove the fields on a Mobile Applications form.

For detailed information about the widgets on HP Service Manager Mobile Applications forms, see "Mobile Applications Form Widgets" on page 1.

To customize the fields on a Mobile Applications form, follow these steps:

1. Follow *step 1* to *step 4* as described in "Add a form for Mobile Applications" on the previous page.
2. Click **Tailoring** > **Forms Designer** and search for the form with the .mobile suffix.
3. Click **Design** to open design mode.
4. Remove the fields which are not exposed to be displayed on the form. The field groups will be displayed as corresponding tabs in the Detail view on Mobile Applications client.

   Note:
   - Do not nest field groups.
   - For usability and performance issues, do not include more than ten fields in a group.
   - If there is one field group defined on a form at a minimum, the widgets which are not included in this group will not be displayed on a Mobile Applications form.

5. Specify the **Label for** property of every lable to match with the **Name** property of the widget next to it.

   Take the IM.close.incident.mobile form for example. If the **Name** property of the Incident ID text box is `id`, the **Label for** property of the Incident ID lable must be specified to `id`.

6. Before adding a field, make sure the field exists in the Database Dictionary.Otherwise, you must firstly add this new field to the Database Dictionary. See *Service ManagerService Manager Help Center* > *Tailoring* > *Data management* > *Fields and Keys tab* > *Add a field to a table* for detailed steps.
7. Click **OK** to save your customization.

Customize the action bar options

To customize the action bar options on the Mobile Applications client, follow these steps:

1. Log on to HP Service Manager using the Windows client as a System Administrator.
2. Select the area in the **Queue** field as you defined in *step 4* of "To create a new view for the Mobile Applications client, follow these steps:" on page 22.
3. Open a record and check which display screen is used by the record . For example, cm.view.display.
4. From the System Navigator, click **Tailoring** > **Tailoring Tools** > **Display Screens** and search for the display screen.
5. Click **Show in Mobility**.

6. Select the area in the **File Name** field.
7. Select **Mobile** in the **Client Type** field, and then click **Search**. IDs of the action bar options are displayed in the **Button Ids** field.
8. Refer to the option IDs and the actions listed in the **Options** tab, add or remove the IDs.
9. Click **Save** to save your customization.

Customizing the Service Manager Mobile Applications CSS

To customize the HP Service Manager Mobile Applications CSS, perform the following tasks:

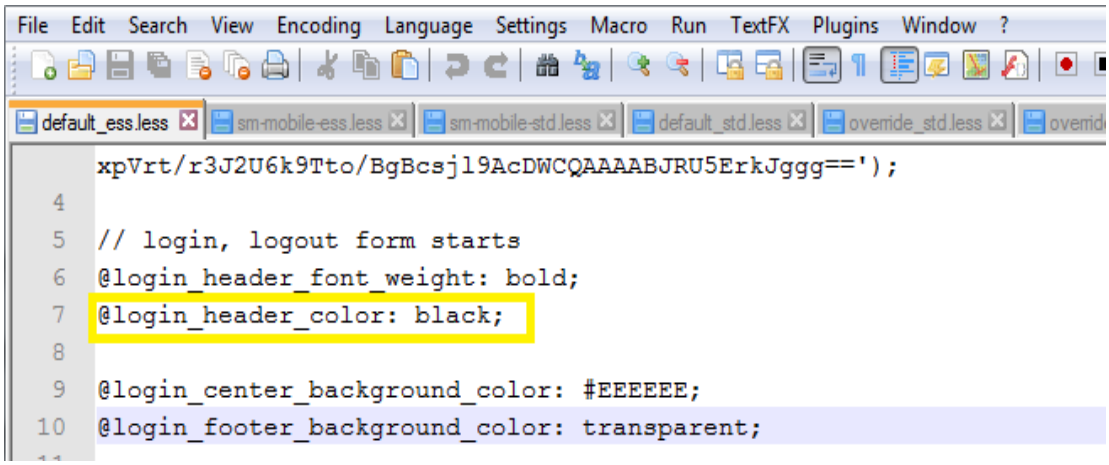
1. "Update LESS files" below
2. "Test Customized LESS files" on the next page
3. "Generate CSS files manually" on page 27
4. "Generate CSS files by Koala" on page 28
5. "Test generated CSS files" on page 29

Update LESS files

LESS extends CSS with dynamic behavior such as variables, mixins, operations and functions. Service Manager Mobile Applications Mobile Applications is using LESS to simplify CSS customization and maintenance. For more information about LESS, visit the LESS official website.

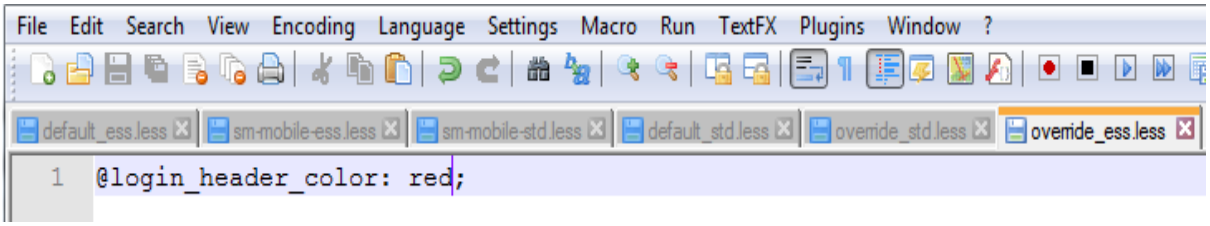
The styles of Mobile Applications web elements which can be customized are defined in default_ess.less and default_std.less in the <Tomcat installation directory>\webapps\<appname>\app\resources\css directory.

Refer to the following screenshot as an example.The text color of the default login header is defined by `@login_header_color`.



The styles can be overridden by the same variables defined in override_ess.less and override_std.less in the <Tomcat installation directory>\webapps\<appname>\app\resources\css directory.

To override the default value, you need to copy the variable from default_ess.less, paste it to override_ess.less, and then specify a new value for it.



Note: Except for override_ess.less and override_std.less, the *.less files in the \app\resources\css directory should not be modified directly because these files might be overwritten during software upgrade.

Test Customized LESS files

To test the customized LESS files, follow these steps:

1. Browse to the <Tomcat installation directory>\webapps\<appname>\WEB-INF\classes\META-INF directory and open the app.properties file with a text editor.
2. Update `debug=false` to `debug=true`, save the file and restart Tomcat.
3. Refer to "Launching Service Manager Mobile Applications on your smartphone" on page 2 and launch the Mobile Applications employee self-service mode.
4. Check the styles are displayed as customized.
5. Refer to either "Generate CSS files manually" or "Generate CSS files by Koala" to generate CSS files according to your customized LESS files.

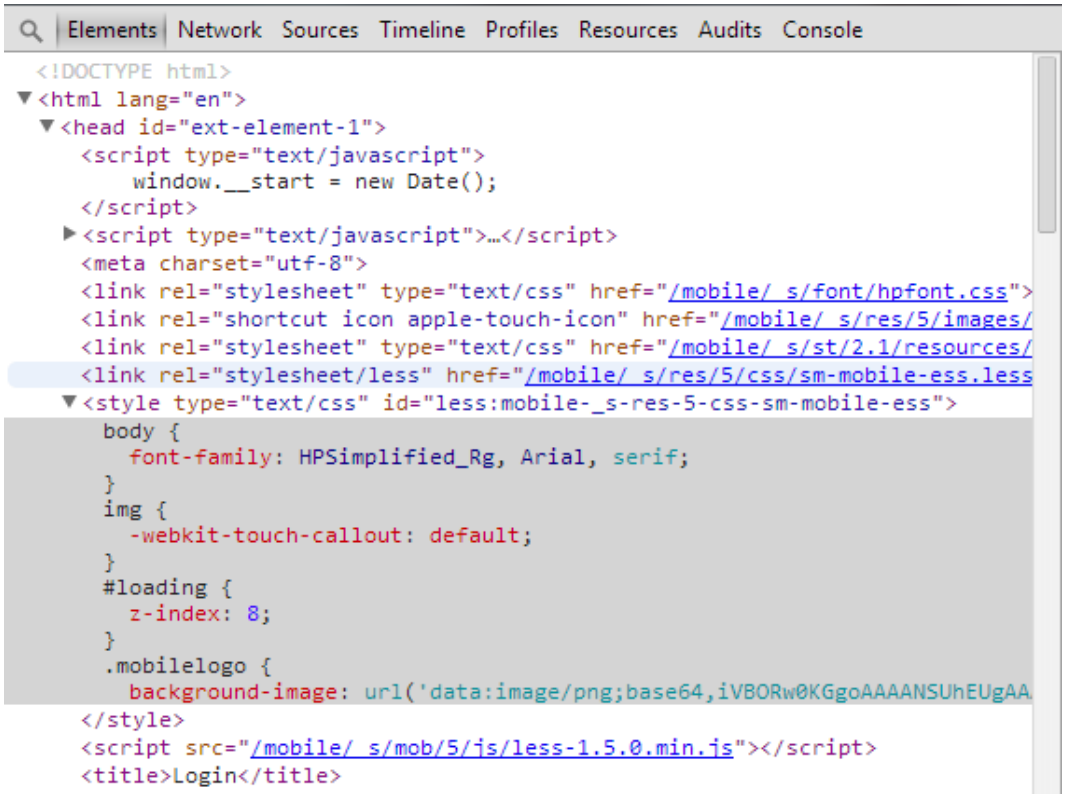
Generate CSS files manually

To generate CSS files manually, follow these steps:

1. Refer to "Launching Service Manager Mobile Applications on your smartphone" on page 2 and launch the Mobile Applications employee self-service mode.

2. In the **Elements** tab, search for `less:mobile-_s-res-5-css-sm-mobile-ess`.

   Refer to the following screenshot as an example:



3. Copy the codes between `<style type="text/css" id="less:mobile-_s-res-5-css-sm-mobile-ess">` and `</style>`.

4. Browse to the <Tomcat installation directory>\webapps\<appname>\app\resources\css directory, replace the content of `sm-mobile-ess.css` with the codes copied in the previous step.

5. Save the CSS file.

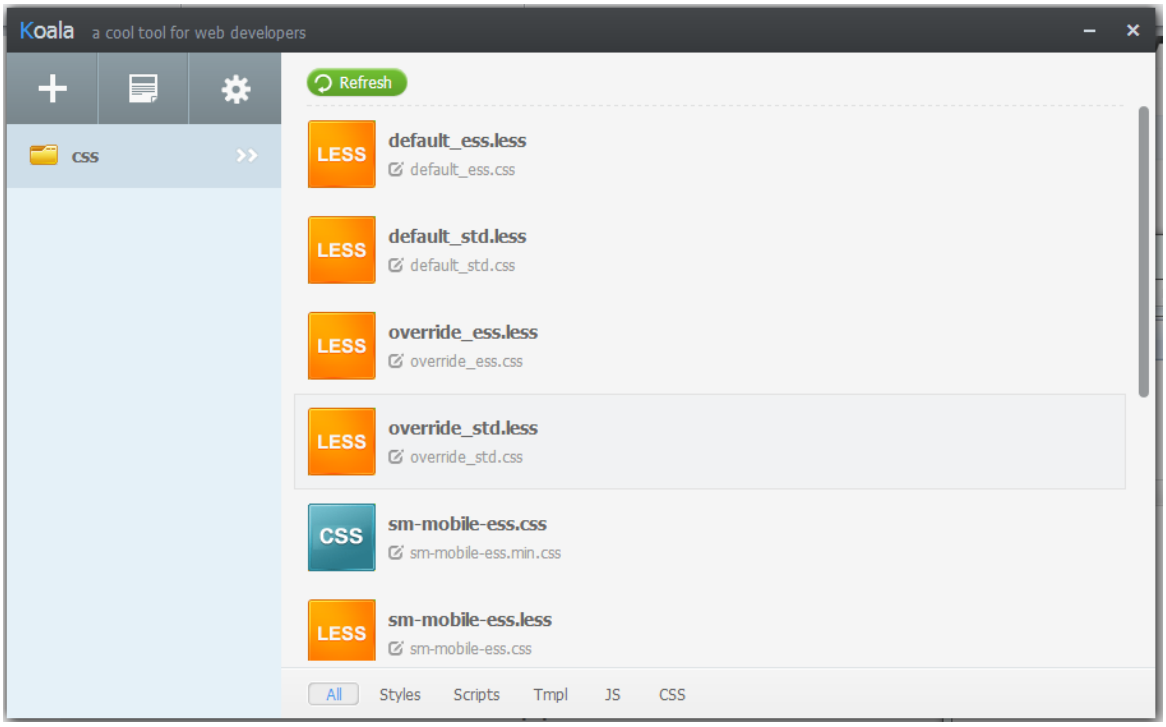
6. Type `http(s)://<hostname>:<port>/<appname>/std/` in the Chrome address bar and then press **Enter** to launch the Mobile Applications standard mode.

7. In the **Elements** tab, search for `less:mobile-_s-res-5-css-sm-mobile-std`.
8. Continue to follow *step 3* through *step 5* to update the CSS file in the standard mode.

Generate CSS files by Koala

To generate CSS files by Koala, follow these steps:

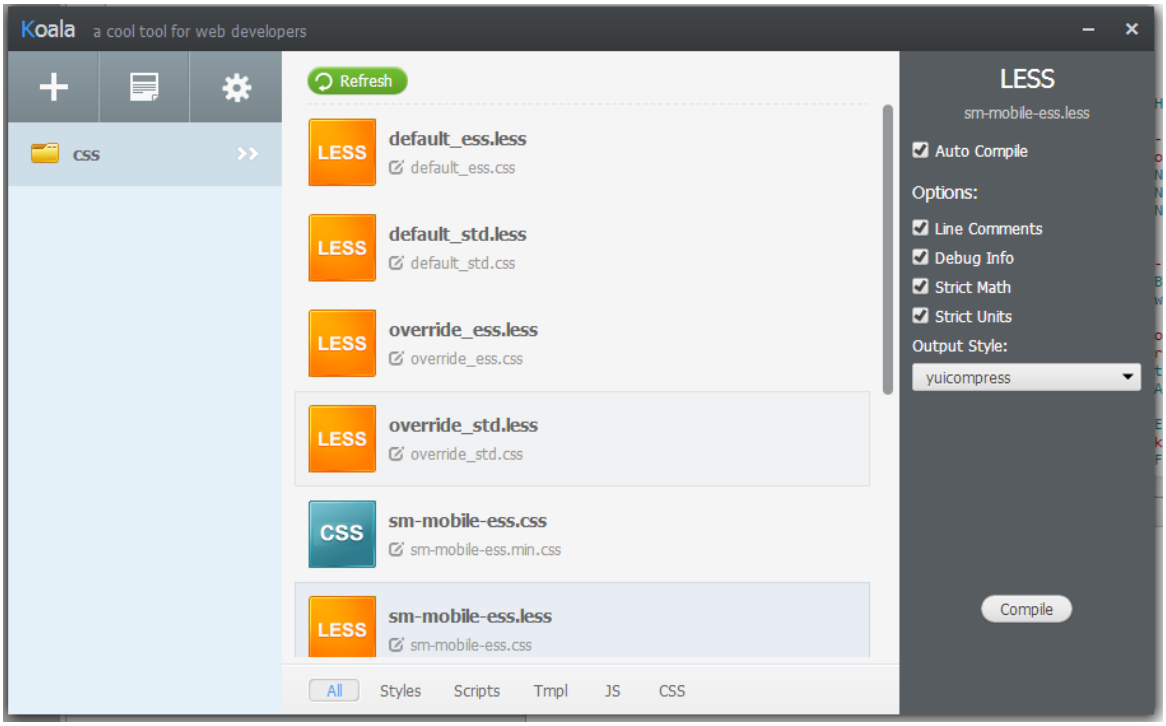
1. Download Koala from http://koala-app.com and install this software on your computer.
2. Browse to the <Tomcat installation directory>\webapps\<appname>\app\resources\css directory and add the LESS folder to Koala by either drag-and-drop or click the **+** button in Koala UI.



3. After overwrite the variables in override_ess.less, use Koala to generate the CSS file.

   Click sm-mobile-ess.less, a panel will be displayed on the right. Click the **Compile** button to

generate a CSS file with the name of sm-mobile-ess.css.

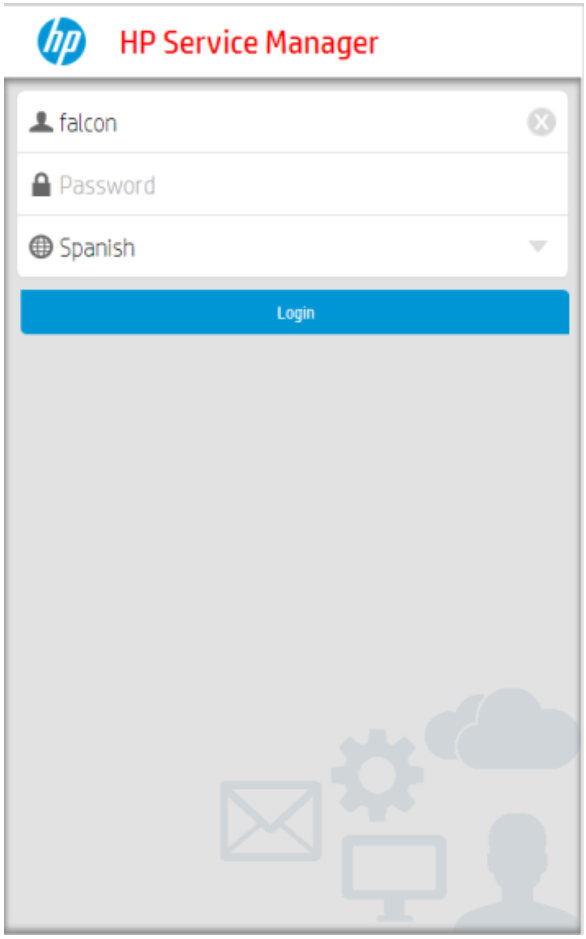


Test generated CSS files

To test the generates CSS files, follow these steps:

1. Browse to the <Tomcat installation directory>\webapps\<appname>\WEB-INF\classes\META-INF directory and open app.properties with a text editor.
2. Change debug mode to `false`.
3. Save and close this file.
4. Restart Tomcat and test Mobile Applications for both standard mode and employee self-service mode.

   For example, after overwrite the text color of login header from black to red, your login screen is displayed as follow:



If you customization is not correctly displayed, clear the browser cache and refresh the browser window.

Protecting communications between Mobile Applications and the Service Manager server

To protect communications between Mobile Applications and the HP Service Manager server, you can perform the following tasks:

- "Set up Secure Sockets Layer (SSL)" on the facing page
- "Set up trusted sign-on (TSO)" on page 33
- "Set up Lightweight Single Sign-On (LW-SSO)" on page 35

Set up Secure Sockets Layer (SSL)

HP Service Manager supports Secure Hypertext Transfer Protocol (HTTPS), which encrypts and decrypts message requests and responses. Service Manager uses Secure Sockets Layer (SSL) for encryption only and relies on the server to authenticate each operator's user name and password. Service Manager supports SSL for the following connections:

- SSL on the Service Manager server to encrypt all communications between clients and the server
- SSL on the Mobile Applications client to verify the client's identity and limit server connections to these identified clients

For detailed information about how to enable SSL and SSO in Service Manager, refer to the *HP Service Manager Help Center* and the *Setting up Single Sign-on in Service Manager* knowledge article.

Enable SSL on the Service Manager server

Service Manager clients send the operator's user name and password in each request as part of an HTTP Basic Authorization header. In order to protect these operators' user names and passwords, you can enable SSL on the Service Manager server.

Enabling SSL on the Service Manager server includes three major steps:

1. Buy a certificate for the Service Manager server from a certificate authority, or create a certificate by yourself.
2. Create a server keystore.
3. Add SSL parameters to the sm.ini file.

> **Note:** Ignore the SSO parameters in the table at this point.

For detailed steps, refer to knowledge article Setting up Single Sign-on in Service Manager.

Enable SSL on the Mobile Applications client

In order to restrict access to the server to only clients that are known and identified by the server, you can enable SSL on Service Manager clients. Enabling SSL on clients requires creating or purchasing signed certificates for each Service Manager client. Service Manager Mobile Applications can share a single signed certificate for all handset connections. If you enable SSL on the client, we recommend that you also enable SSL on the server to encrypt all communications between clients and the server.

To enable SSL on the Mobile Applications client, follow these steps:

1. Buy a certificate for the Mobile Applications client host from the same certificate authority for the Service Manager server certificate, or create a certificate by yourself.
2. Create a client keystore.
3. Import the client certificate to a trusted clients keystore. For example, trustedclients.keystore.
4. Copy the trusted clients keystore (trustedclients.keystore) to the Service Manager server's RUN folder.
5. Open webapp-9.40.xxxx.war in an archive management program.
6. Copy the cacerts file to the WEB-INF directory.
7. Extract the web.properties file from the WEB-INF directory to your local system, and then open this file in a text editor.
8. Locate the following scripts and configure the parameters as follow:

```
endpoint=https://full.qualified.domain.name:13443/SM/ui

cacerts=
keystore=
keystorePassword=
```

Required parameters for Mobile Applications client SSL configurations

Parameter	Default value	Description
endpoint	`https://full.qualified.domain.name:13443/SM/ui`	Change `full.qualified.domain.name` to the domain name of your Service Manager server. Change `13443` to your SSL port number.
cacerts	The default value is null.	Add the name of your cacerts file.
keystore	The default value is null.	Add the name of the keystore file.
keystorePassword	The default value is null.	Add the password of the keystore file.

9. Save the file and add the updated file back to the WEB-INF directory of the webapp-9.40.xxxx.war archive.

Set up SSL between the smartphone browser and Mobile Applications

You can set up SSL to allow smartphone browsers and web servers to communicate over a secure connection. The data being sent is encrypted by one side, and decrypted by the other side before processing. This is a two-way process, meaning that both the server and the browser encrypt all traffic before sending out the data.

After SSL is set up on the web servers, browsers which support secure flag only send cookies with the secure flag when the request is going to an HTTPS page, that is, the browser does not send a cookie with the secure flag set over an unencrypted HTTP request.

You need to set up only on the web server or web application server where the Mobile Applications client is deployed. No additional SSL configuration is needed for the Mobile Applications client.

Set up SSL on you web server

For details, refer to the documentation of your web server.

Set up SSL on Tomcat 7

Configuring Tomcat to use SSL is only necessary when Tomcat is run as a stand-alone web server. When Tomcat is primarily run as a Servlet/JSP container behind another web server, such as Apache or Microsoft IIS, it is necessary to configure the primary web server to handle the SSL connections from users. Typically, this server negotiates all SSL-related functionality, and then pass on any requests destined for the Tomcat container only after decrypting those requests. Likewise, Tomcat returns cleartext responses that are encrypted before being returned to the user's browser. In this case, Tomcat knows that communications between the primary web server and the client are taking place over a secure connection, but it does not participate in the encryption and decryption processes.

For information about how to set up SSL on Tomcat 7, refer to *Apache Tomcat 7 SSL Configuration HOW-TO* document.

Note: Since you have already got your certificates for the server as described in the previous step in the "Enable SSL on the Mobile Applications client" on page 31 section, you only need to perform the steps in the **Edit the Tomcat Configuration File** section in Apache Tomcat 7 SSL Configuration HOW-TO document.

Set up trusted sign-on (TSO)

Trusted sign-on (TSO) or Single sign-on is an optional Mobile Applications configuration that relies on a working SSL configuration, and integration with a trusted authentication source such as CA SiteMinder, IBM Webseal, and Integrated Windows Authentication. It also requires a web server to accept the pre-authenticated HTTP header information from your authentication source.

For more information, refer to Setting up Single Sign-on in Service Manager.

When you enable trusted sign-on (TSO), Mobile Applications will used the username of the user represented by the Principal to bypass the HP Service Manager log-on screen, and then enter the application directly.

Enable TSO on the Service Manager server

In the sm.ini file, add the following parameter:

```
trustedsignon:1
```

For detailed information, refer to Setting up Single Sign-on in Service Manager.

Enable TSO on the Mobile Applications client

To enable TSO on the Mobile Applications client, follow these steps:

1. Open webapp-9.40.xxxx.war in an archive management program.
2. Extract the web.properties file from the WEB-INF directory to your local system, and then open this file in a text editor.
3. Locate the `isCustomAuthenticationUsed` script and set the value to `false`:

   ```
   # Set false to enable Trusted Sign-on
   isCustomAuthenticationUsed=false
   ```

4. Save the file and add the updated file back to the WEB-INF directory of the webapp-9.40.xxxx.war archive.
5. Extract the security.xml file from the WEB-INF/spring directory to your local system, and then open this file in a text editor.
6. Locate the following scripts:

   ```
   <!-- <security:custom-filter ref="preAuthenticationFilter" after="SECURITY_
   CONTEXT_FILTER"/>
       <security:custom-filter ref="lwSsoFilter" before="BASIC_AUTH_FILTER"/>
       <security:custom-filter ref="springSecurity2lwssoIntegrationFilter"
   position="LAST"/> -->
   ```

   Uncomment the first line as follows to enable TSO:

   ```
   <security:custom-filter ref="preAuthenticationFilter" after="SECURITY_CONTEXT_
   FILTER"/>
       <!--  <security:custom-filter ref="lwSsoFilter" before="BASIC_AUTH_
   FILTER"/>
       <security:custom-filter ref="springSecurity2lwssoIntegrationFilter"
   position="LAST"/> -->
   ```

   Or,

For HTTP header pre-authentication, locate the following scripts and uncomment it:

```
<!--<security:custom-filter ref="httpHeaderPreAuthenticationFilter"
after="SECURITY_CONTEXT_FILTER"/>-->
```

7. Locate the httpHeaderPreAuthenticationFilter bean definition, and then at least change the principalRequestHeader setting, corresponding to the Header your Identity Management solution uses. For Webseal, iv-user is used as the value of principalRequestHeader, Siteminder often uses sm_user or sm_universalid. Note that this setting is case sensitive.
8. Save the file and add the updated file back to the WEB-INF/spring directory of the webapp-9.40.xxxx.war archive.
9. Configure the deployment environment to support the mobile system to receive the customized user information for authentication.

Set up Lightweight Single Sign-On (LW-SSO)

If Lightweight Single Sign-On (LW-SSO) is enabled on both the HP Service Manager server and the Mobile Applications, Service Manager authentication will be bypassed if you have logged into another web application which also has LW-SSO enabled. The detailed bypass critieria includes both the protected domain/IP/DNS name and the initial LW-SSO string.

Enable LW-SSO on the Service Manager server

For detailed information about how to enable LW-SSO on Service Manager server, refer to the *HP Service Manager 9.40 Help Center*.

Enable LW-SSO on the Mobile Applications client

To enable LW-SSO on the Mobile Applicationsclient, follow these steps:

1. Open webapp-9.40.xxxx.war in an archive management program.
2. Extract the security.xml file from the WEB-INF/spring directory to your local system, and then open this file in a text editor.
3. Locate the following scripts:

```
<!-- <security:custom-filter ref="preAuthenticationFilter" after="SECURITY_
CONTEXT_FILTER"/>
    <security:custom-filter ref="lwSsoFilter" before="BASIC_AUTH_FILTER"/>
    <security:custom-filter ref="springSecurity2lwssoIntegrationFilter"
position="LAST"/> -->
```

Uncomment the second line and the third line as follows to enable LW-SSO:

```
<!-- <security:custom-filter ref="preAuthenticationFilter" after="SECURITY_
CONTEXT_FILTER"/> -->
    <security:custom-filter ref="lwSsoFilter" before="BASIC_AUTH_FILTER"/>
    <security:custom-filter ref="springSecurity2lwssoIntegrationFilter"
position="LAST"/>
```

4. Save the file and add the updated file back to the WEB-INF/spring directory of the webapp-9.40.xxxx.war archive.

5. Extract the lwssofmconf.xml file from the WEB-INF/classes directory to your local system, and then open this file in a text editor.

6. Configure the boldface parameters as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<lwsso-config
    xmlns="http://www.hp.com/astsecurity/idmenablmentfw/lwsso/2.0">
    <enableLWSSO enableLWSSOFramework="true" enableCookieCreation="true"
cookieCreationType="LWSSO" enableSAML2Support="false"/>
    <webui>
        <validation>
            <in-ui-lwsso>
                <lwssoValidation  id="ID000001">
                    <domain>example.com</domain>
                    <crypto cipherType="symmetricBlockCipher"
                        engineName="AES" paddingModeName="CBC" keySize="256"
                        encodingMode="Base64Url"
                        initString="Please put your string here"></crypto>
                </lwssoValidation>
            </in-ui-lwsso>
        </validation>

        <creation>

            <lwssoCreationRef id="ID000002">
                <lwssoValidationRef refid="ID000001"/>
                <expirationPeriod>60</expirationPeriod>
            </lwssoCreationRef>

        </creation>

        <logoutURLs>
            <url>.*/std/logout</url>
            <url>.*/std/goodbye</url>
        </logoutURLs>

        <multiDomain>
```

```
            <trustedHosts>
               <!-- <DNSDomain>companydomain1.com</DNSDomain>
                <DNSDomain>companydomain2.com</DNSDomain>
                <NetBiosName>myserver1</NetBiosName>
                <NetBiosName>myserver2</NetBiosName>
                <IP>192.168.12.13</IP>
                <IP>192.168.12.14</IP>
                <FQDN>myserver1.companydomain1.com</FQDN>
                <FQDN>myserver2.companydomain2.com</FQDN>  -->
            </trustedHosts>
        </multiDomain>
    </webui>
</lwsso-config>
```

Required parameters for Mobile Applications client LW-SSO configurations

Parameter	Default value	Description
enableLWSSOFramework	`false`	Change this value to `true` to enable the LW-SSO framework.
domain	`example.com`	Change `example.com` to the domain name of the server host where you deploy your Mobile Applications client.
initString	`Please put your string here`	Enter your initial string. This initial string must be same as the initString value in the Service Manager LW-SSO configuration (minimum length: 12 characters). For example, smintegrationlwsso.

Note: Beginning from the `<creation>` section to the end of the lwssofmconf.xml file, the variables are subject to change according to your actual deployment.

7. Save the file and add the updated file back to the WEB-INF/classes directory of the webapp-9.40.xxxx.war archive.

Appendix A

Mobile Applications Form Widgets

This chapter provides detailed information about the widgets on HP Service Manager Mobile Applications forms.

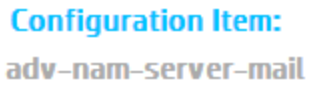
This chapter includes:

- "Label control" below
- "Text control" on the next page
- "Text area control" on page 3
- "Date control" on page 4
- "Combo Box control" on page 5
- "Comfill control" on page 7
- "Group control" on page 9
- "Button control" on page 10
- "Check box control" on page 11
- "Table control" on page 14
- "Table column control" on page 15
- "Subform control" on page 16
- "Dynamic Form control" on page 16
- "Notebook control" on page 17
- "Notebook tab control" on page 17

Label control

Use this control to add a label. A label is a single line of text you can use to give titles to forms, give labels to objects within the form, or otherwise place text on the form.

Refer to the following screenshot as an example of the label control widget on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	(Required) Specify a text caption for the object.
Input	(Optional) Specify the database field or variable to associate with this control. When input is specified, the Label will be displayed as a read-only Text.
Label For	(Optional) Specify the widget which the label belongs to.

Note: A label which is neither referred by any field or variable nor belongs to any other widget will not be displayed on a Mobile Applications form.

Text control

Use this control to add a text box that displays the contents of a text field and conditionally enables users to enter or modify its contents.

Refer to the following screenshot as an example of the text control widget on a Mobile Applications form:

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the Label For property to specify the label of this widget.
Input	Specify the database field or variable to associate with this control.
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field.

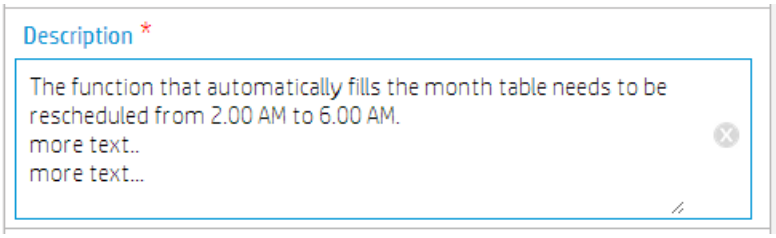
Property	Usage
Mandatory	Setting Mandatory to **Yes** by selecting the check box indicates that the field is required and therefore an asterisk indicating a required field is displayed. This is a visible change only. To make the field mandatory for any form it appears on, use the System Definition Utility. To make the field mandatory for a small number of forms only, use Format Control.

Note: If the text is too long for a mobile device to display in one line, use a Text area control instead.

Text area control

Use this control to add a text area that displays the contents of a text field and conditionally enables users to input several lines of data. This object contains scroll bars and allows text wrapping.

Refer to the following screenshot as an example of the text area control widget on a Mobile Applications form:

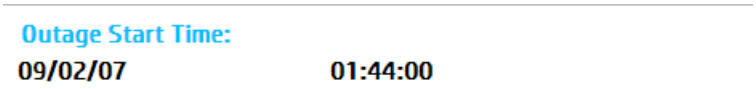

Description *
The function that automatically fills the month table needs to be rescheduled from 2.00 AM to 6.00 AM.
more text..
more text...

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the Label For property to specify the label of this widget.
Input	Specify the database field or variable to associate with this control.
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field.
Mandatory	Select this option so that a red asterisk indicating a required field is displayed. This is a visible change only. • To make the field mandatory for any form it appears on, use the System Definition Utility. • To make the field mandatory for a small number of forms only, use Format Control.

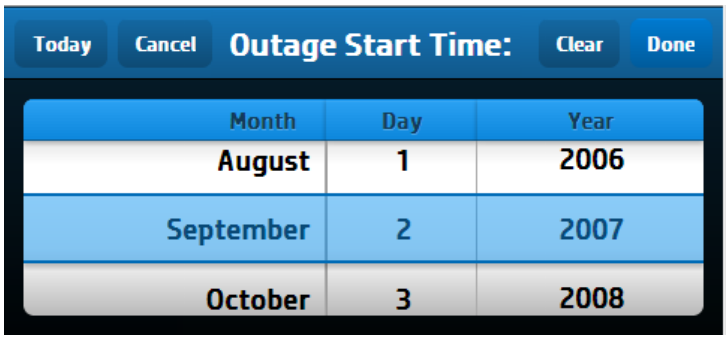
Date control

Use this control to add a text box that displays and enables users to update the contents of a date field.

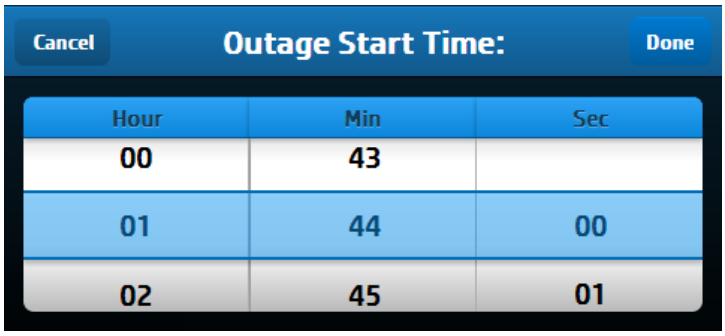
Refer to the following screenshot as an example of the date control widget on a Mobile Applications form:



Refer to the following screenshot as an example of the date selector on a Mobile Applications form:



Refer to the following screenshot as an example of the time selector on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the Label For property to specify the label of this widget.
Input	Specify the database field or variable to associate with this control.
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field.

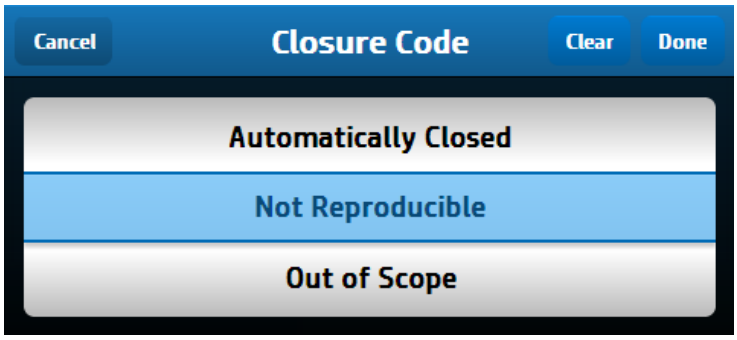
Property	Usage
Mandatory	Select this option so that a red asterisk indicating a required field is displayed. This is a visible change only. • To make the field mandatory for any form it appears on, use the System Definition Utility. • To make the field mandatory for a small number of forms only, use Format Control.

Combo Box control

Use this control to add a Combo Box that enables users to click a button and select from a drop-down list. The items in the list are associated with a database field or variable. Users can also type in a value if the check box in the Select Only property is cleared (set to false).

Refer to the following screenshot as an example of the Combo Box control widget on a Mobile Applications form:

Refer to the following screenshot as an example of the Combo Box selector on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the Label For property to specify the label of this widget.
Input	Specify the database field or variable to associate with this control.

Property	Usage
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field. Give read–only fields a tab–stop value of –1 to prevent users from tabbing into them.
Mandatory	Select this option so that a red asterisk indicating a required field is displayed. This is a visible change only. • To make the field mandatory for any form it appears on, use the System Definition Utility. • To make the field mandatory for a small number of forms only, use Format Control.
Value List	In conjunction with the Input property, defines how the Display List values are identified in the database. Value and Display Lists are entered using the Edit List dialog box. You can enter hard coded entries for each list, or you can supply a variable as the first and only entry. The run time values of the variable are used to populate these lists. **Note:** When defining Value List and Display List properties, you should avoid using the following reserved characters: • semicolon (;) • tab key • newline (carriage return) • form feed • backspace • equal sign (=) **Caution:** Do not use keys (such as backspace). The system cannot process their ASCII representation entries correctly, which may lead to unpredictable results.

Property	Usage
Display List	Specify the values that appear in the drop-down list at run time. There must be a one–to–one correspondence between the values for Value List and for Display List. If the Display List is the only populated property, the display values are written to the database. **Note:** When defining Value List and Display List properties, you should avoid using the following reserved characters: • semicolon (;) • tab key • newline (carriage return) • form feed • backspace • equal sign (=) **Caution:** Do not use keys (such as backspace). The system cannot process their ASCII representation entries correctly, which may lead to unpredictable results.

Note: Combo box is always select-only on HP Service Manager Mobile Applications.

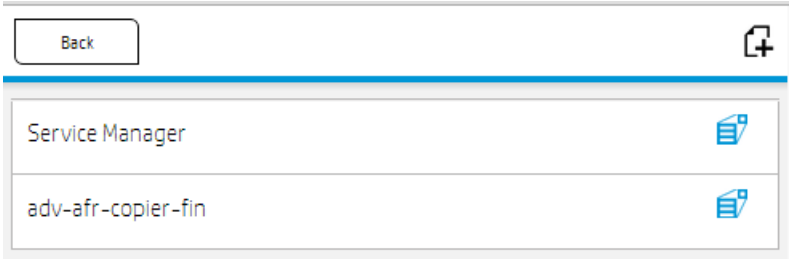
Comfill control

Use this control to add a combination Combo Box and Fill button. Comfill has all the properties of a Combo Box, plus the capability for Fill button. You can select which comfill buttons to display. For example, to display just a Fill button, set the Third Button Visible property to true by selecting the check box and set the Combo Button Visible property to false, by clearing the checkbox.

Refer to the following screenshot as an example of the non-array comfill widget with popup form enabled on a Mobile Applications form:

Refer to the following screenshot as an example of the array comfill widget on a Mobile Applications form:

Refer to the following screenshot as an example of the array comfill widget after clicking:



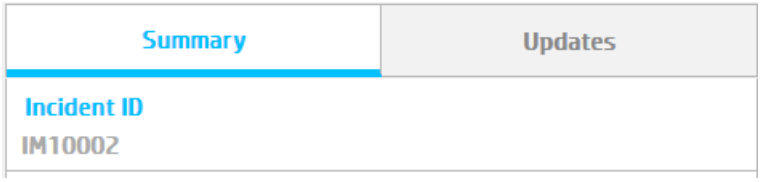
Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the Label For property to specify the label of this widget.
Input	Specify the database field or variable to associate with this control.
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field.
Mandatory	Select this option so that a red asterisk indicating a required field is displayed. This is a visible change only. • To make the field mandatory for any form it appears on, use the System Definition Utility. • To make the field mandatory for a small number of forms only, use Format Control.
Array Length	Specify the size of the scrolling region used to view array entries. A scroll bar appears beside the fields to allow users to view the array entries. • If a field is assigned an Array Length of 5, the form stacks five fields vertically to allow users to view the five array entries. • If Array Length is set to -1, the form dynamically creates as many fields as there are entries in the array. • If the Input data type is scalar, only a single text box appears. **Note:** The screen object must be associated with an array data structure. The default is 0, which means one vertical line of information appears.

Property	Usage
Value List	In conjunction with the Input property, defines how the Display List values are identified in the database. Value and Display Lists are entered using the Edit List dialog box. You can enter hard coded entries for each list, or you can supply a variable as the first and only entry. The run time values of the variable are used to populate these lists.
Display List	Specify the values that appear in the drop-down list at run time. There must be a one–to–one correspondence between the values for Value List and for Display List. If the Display List is the only populated property, the display values are written to the database.
Combo Button Visible	Select this option to make the Combo Button visible when the form opens. **Note:** When this property is enabled, the Fill Button Visible property is no longer effective.
Fill Button ID	Specify a Control ID to transmit when clicked.
Fill Button Visible	Select this option to make the Fill Button visible when the form opens.
Popup Subform Format	Specify the form to display.
Popup Subform Input	Specify the database field or variable to associate with this control.
Popup Subform Enabled	Select this option to enable the Popup Subform for this control.

Group control

Use this control to add a container that enables you to logically group associated items. In the Windows client the Group has a rectangular border with a text label at the top.

Refer to the following screenshot as an example of the group control widget on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	(Required) Specify a text caption for the object.

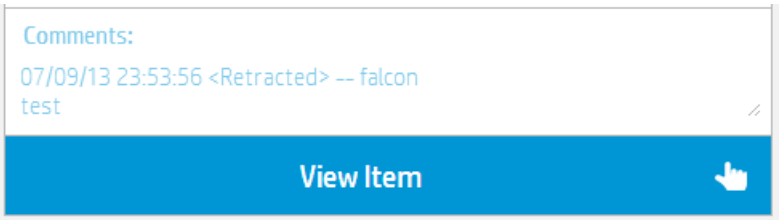
Note:

- Do not nest field groups.
- For usability and performance issues, do not include more than ten fields in a group.
- If there is one field group defined on a form at a minimum, the widgets which are not included in this group will not be displayed on a Mobile Applications form.

Button control

Use this control to add an input field that displays and enables users to update the contents of a numeric field and offers spinner buttons to increase or decrease a value.

Refer to the following screenshot as an example of the button control widget on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	Specify a text caption for the object.
Button ID	Specify a numeric identification that specifies a Control ID to transmit when clicked.

Check box control

Use this control to add a check box that displays and enables users to update the contents of a Boolean (logical) field, which can evaluate to true, false, unknown, or null.

Refer to the following screenshot as an example of the check box control widget on a Mobile Applications form:

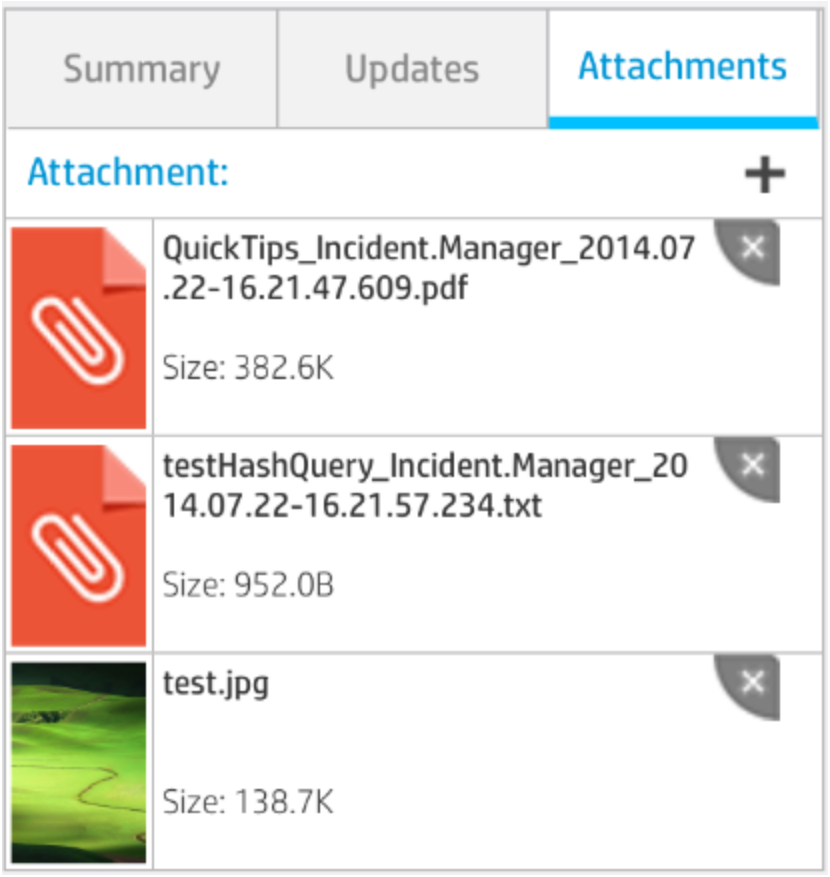
Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	Specify a text caption for the object.
Input	Specify the database field or variable to associate with this control.
Read-Only	Select this option to disable editing capabilities and provide only viewing access to the field. Give read–only fields a tab–stop value of –1 to prevent users from tabbing into them.

Attachments control

Use this control to add a box into which users can place non- Service Manager documents (For example, from Microsoft Word or Microsoft Excel).

To place an attachment container on a form, click **Attachments**, and then click the form.

Refer to the following screenshot as an example of the Attachments control widget on a Mobile Applications form:



Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This identifier is used by external applications, such as RAD, to dynamically change the properties of the object.
Visible	Select this option to make the object visible on the form. Clear the check box to hide the object from view on the form.
Read-Only	Disable the editing capability of the control. Users can only view the attached documents when this option is selected. To prevent users from using the Tab key to enter the control, you can assign the value of -1 to the Read-Only field.
Maximum Attachment Size	Specify the maximum size of an attachment, in bytes. **Note:** Size limits defined in the Maximum Attachment Size field in a user's operator record override the size limit specified in the Company record. A non-zero value overrides any values specified in the Company or Operator record.

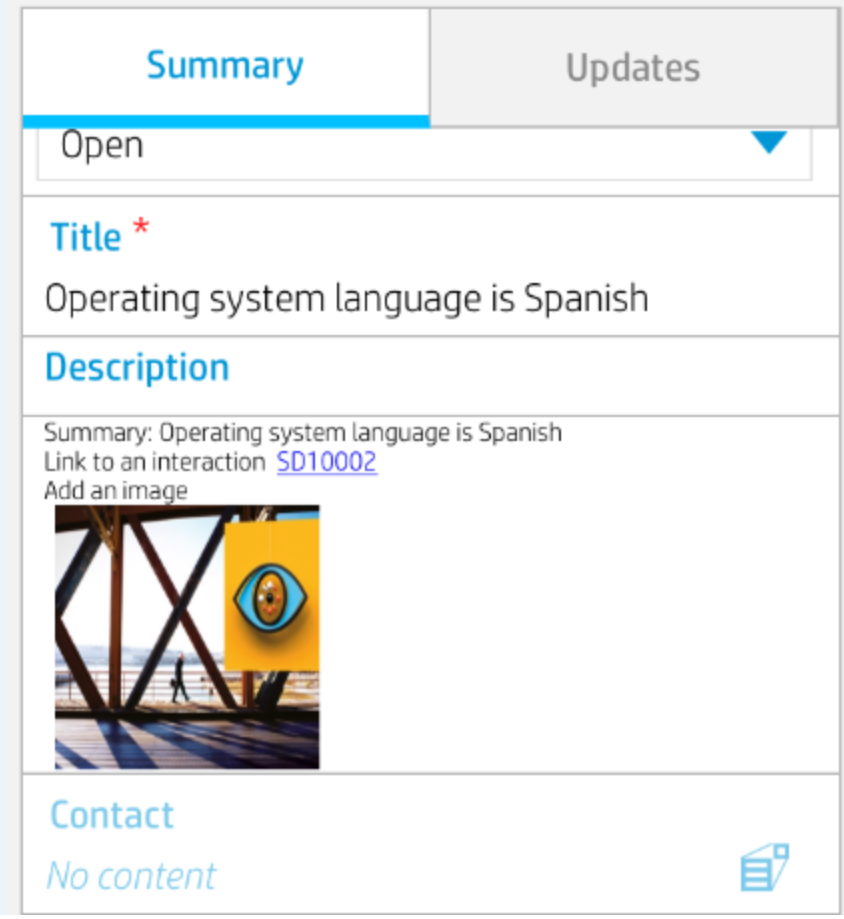
Property	Usage
Total Attachment Size	Specify the maximum amount of memory (in bytes) that all attachments in a form can use. The total size of all attachments must be lower than this threshold or the form no longer accepts additional attachments.
Maximum Attachments Allowed	Select whether you want to allow one or any number of attachments. **Known issue**: This property is not supported in Mobile Applications.

HTML Viewer control

Use this control to add an HTML Viewer that enables users to view the HTML created by using the HTML Editor.

To place an HTML Viewer on a form, click **HTML Viewer**, and then click the form. Be sure to put the name of the database field or variable that you want to associate with this control into the Input property.

Refer to the following screenshot as an example of the HTML Viewer control widget on a Mobile Applications form:

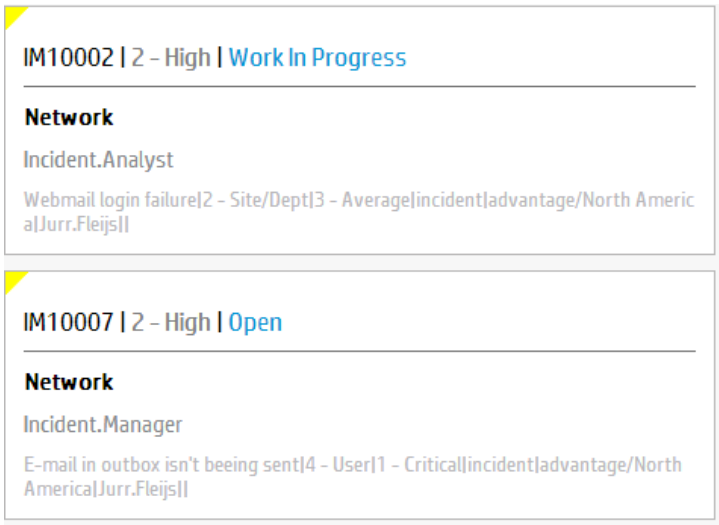


Property	Usage
Input	Specify the database field or variable to associate with this control.
Name	(Optional) Specify a unique identifier for the object on the screen.
Visible	Make the object visible or invisible on the form. Selecting the check box makes the object visible and clearing the check box makes it invisible.

Table control

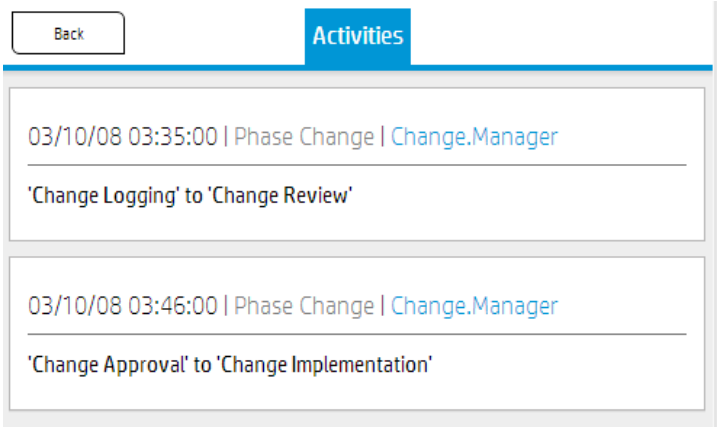
Use this control to add a table that displays one or more columns of data in a scrollable pane. The tables you create in the Form Designer appear as a rectangular region subdivided by rows and columns. The look and feel mimics tables in Microsoft Windows applications like Excel.

Refer to the following screenshot as an example of the table control widget in List view:


IM10002 | 2 - High | Work In Progress
Network
Incident.Analyst
Webmail login failure|2 - Site/Dept|3 - Average|incident|advantage/North Americ a|Jurr.Fleijs||
IM10007 | 2 - High | Open
Network
Incident.Manager
E-mail in outbox isn't beeing sent|4 - User|1 - Critical|incident|advantage/North America|Jurr.Fleijs||

Refer to the following screenshot as an example of the table control widget in Detail view:

Refer to the following screenshot as an example of the table control widget after clicking:


Back
Activities
03/10/08 03:35:00 | Phase Change | Change.Manager
'Change Logging' to 'Change Review'
03/10/08 03:46:00 | Phase Change | Change.Manager
'Change Approval' to 'Change Implementation'

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This field is required if you enable the Multiple Selection property. This name is used by external applications, such as RAD, to dynamically change the properties of the object. This name is also used by the “Label For” property to specify the label of this widget.
Read-Only	Always read-only.
Columns	Specify a list of columns in the table.

Table column control

Use this control to add a column to an existing table.

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	Specify a text caption for the object.
Input	Specify the database field or variable to associate with this control.
Field	In the case where the array specified in the input property is an array of structure, it specifies the field in the structure for this object.
Display List	Specify the values that appear in the drop-down list at run time. There must be a one–to–one correspondence between the values for Value List and for Display List. If the Display List is the only populated property, the display values are what were written to the database.

Property	Usage
Read-Only	Always read-only.

Subform control

Use this control to display a subform on another form.

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Format	Specify the form to display. Be sure you type the exact form name.
Virtual Join	Select this option to associate virtual join run time processing with the subform object. Clear the check box to use a same-file join.
Display Using Table	Select this option to display the subform in table format.
Input	Specify the database field or variable to associate with this control.

Dynamic Form control

Use this control to add a dynamic form that becomes visible when populated by XML from a RAD application or JavaScript. The aspect and content of the dynamic form depend on the XML.

To place a dynamic form on a form, click **Dynamic Form** and then click the form.

Be sure to put the name of the database field or variable that you want to associate with this control into the Input property.

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Visible	Select this option to make the object visible on the form. Clear the check box to hide the object from view on the form.
Read-Only	In this release, we does not support change user options from mobile. All the contents inside the dynamic form will be read-only.
Input	Specify the database field or variable to associate with this control.

Notebook control

Use this control to subdivide the contents of a screen into logical groups or categories. Notebooks provide an aesthetic way of organizing large amounts of data into small spaces.

Click to the right of the last tab on the notebook to open the notebook properties. Click the tab and then the blank area below the tab to open the notebook tab properties.

To place a notebook on a form, click **Notebook** and then click the form.

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Visible	Select this option to make the object visible on the form. Clear the check box to hide the object from view on the form.

Notebook tab control

Use this control to add a tab to an existing notebook. Navigate to each page of the notebook by selecting its tab.

Click to the right of the last tab on the notebook to open the notebook's properties. Click the **notebook** tab and then the blank area below the tab to open the notebook tab's properties.

Property	Usage
Name	(Optional) Specify a unique identifier for the object on the screen. This name is used by external applications, such as RAD, to dynamically change the properties of the object.
Caption	(Required) Specify a text caption for the object.
Visible	Select this option to make the object visible on the form. Clear the check box to hide the object from view on the form.

Appendix B

Mobile Applications for HP Service Manager Process Designer

As of HP Service Manager 9.32, multiple Mobile Applications forms are designed for Process Designer (PD) Content Pack 9.30.3 because this Content Pack provides different Change, Incident and Interaction logic comparing with HP Service Manager out-of-box data. In addition, more Mobile Applications forms are designed for HP Service Manager 9.40 Codeless. Refer to the following table for detail.

Mobile Application forms designed for PD

Module	Workflow	Phase	Display Option/Action/Transation	Forms for Mobile Applications
Change	Emergency	E-CAB Approval	Approve, Deny, Retract and Save	chm.emergency.approval.mobile chm.subform.activity.mobile
	Standard	Authorization CAB	Approve, Deny, Retract and Save	chm.standard.approval.mobile
	Normal	T-CAB Approval D-CAB Approval	Approve, Deny, Retract and Save	chm.normal.dcab.approval.mobile chm.normal.tcab.approval.mobile
	Change Proposal	Authorization CAB	Approve, Deny, Retract and Save	chm.proposal.tcab.approval.mobile
Incident	Incident	Categorization Investigation Review Recovery Closure	Save and Close	im.incident.categorization.mobile im.incident.investigation.mobile im.incident.recovery.mobile im.incident.review.mobile im.incident.closure.mobile im.incident.close.mobile

Mobile Application forms designed for PD, continued

Module	Workflow	Phase	Display Option/Action/Transation	Forms for Mobile Applications
Interaction	Service Catalog	Categorization Work In Progress Review Closure	Approve, Deny, Retract, Update and Close	sd.interaction.svc.categorization.mobile sd.interaction.svc.workinprogress.mobile sd.interaction.svc.review.mobile sd.interaction.svc.closure.mobile
	Service Desk	Categorization Work In Progress Review Closure	Update, Close	sd.interaction.categorization.mobile sd.interaction.closure.mobile sd.interaction.workinprogress.mobile sd.interaction.review.mobile sd.interaction.subform.detail.mobile
Request	Request	Authorization	Approve, Deny	rm.request.authorization.mobile rm.request.fullfillment.subform.detail.mobile

Note: Being widely used in PD forms, the Dynamic View Dependencies (DVD) conditions for widgets are not supported by Mobile Applications. On Mobile Applications client, errors may occur when you are updating a record which uses PD forms with DVD conditions. The errors include blank title on the Related Records tab, some invisible fields in HP Service Manager become visible on Mobile Applications client, and so on. HP recommends you to use customized forms on Mobile Applications client and avoid the DVD conditions.

PD Change module

A typical usage of your Mobile Applications is to approve or deny a change on the smartphone regardless of the change's category. Based on the phases and workflows introduced by PD, a series of chm.*.mobile sample forms are designed for Mobile Applications to address the Emergercy, Standard, Normal changes and the Change Proposals. For Normal or Standard changes, or Emergency changes in a phase other than E-CAB Approval , you need to define your own forms. Otherwise, the original PD forms will be exposed on Mobile Applications client.

You need to move the created Emergency change to the E-CAB Approval phase in HP Service Manager before utilizing them on Mobile Applications client. For any Emergency change in the E-CAB Approval phase, Mobile Applications client displays Change Main, Updates, and Approval groups as corresponding tabs in the Detail view. You are able to approve, deny and update a change in this phase. In addition, you are also able to search for any approved or denied change by using global search and then retract the change.

PD Incident module

For a newly created incident in the Categorization phase, Incident Details, Categorization and Assignment, Major & Escalation, Activities, Proposed Solution and Related Records groups are displayed as corresponding tabs in the Detail view on Mobile Applications client. You are able to update the incident in this phase.

Change the incident's status to Work in Progress, the incident moves to the Investigation phase. You are able to update the incident in this phase.

After updating the proposed solutions and save the record, the incident moves to the Recovery phase. You are able to update and close the incident in this phase.

After changing the incident's status to Resolved, the incident moves to the Review phase. The Proposed Solution tab is renamed to Recovery Action and you are able to update and close the incident in this phase.

After closing the incident on Mobile Applications client, the incident moves to the Closure phase and all tabs become read-only.

PD Interaction module

If an interaction is ordered from the catalog or opened by Service Desk and includes pending request level approvals, it is read-only on Mobile Applications client before all approvals are approved. You are able to approve or deny the interaction in this phase. In addition, you are also able to search for any approved or denied interaction by using global search and then retract the interaction.

After approving all pending approvals, the interaction moves to the Work In Progress phase. You are able to update and withdraw the interaction in this phase.

After updating the proposed solutions and save the record, the interaction moves to the Review phase. You are able to update and close interaction in this phase.

After closing the interaction on Mobile Applications client, the interaction moves to the Closure phase and all tabs become read-only.

Appendix C

Troubleshooting

This chapter provides troubleshooting information about HP Service Manager Mobile Applications installation and configuration issues and provide solutions.

This chapter includes:

- "Widgets do not support Dynamic View Dependencies (DVD)" below

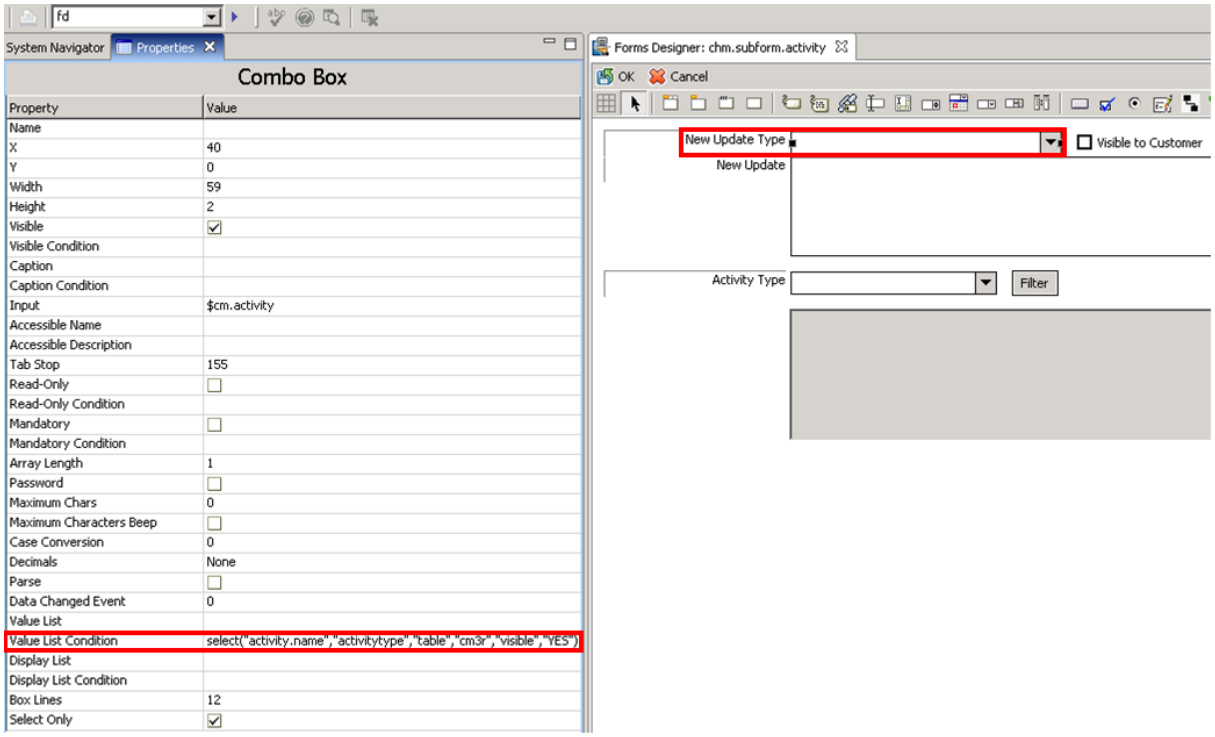
Widgets do not support Dynamic View Dependencies (DVD)

Issue

Some widgets on the forms do not support the Dynamic View Dependencies (DVD) feature of Forms Designer. How to solve this problem?

Solution

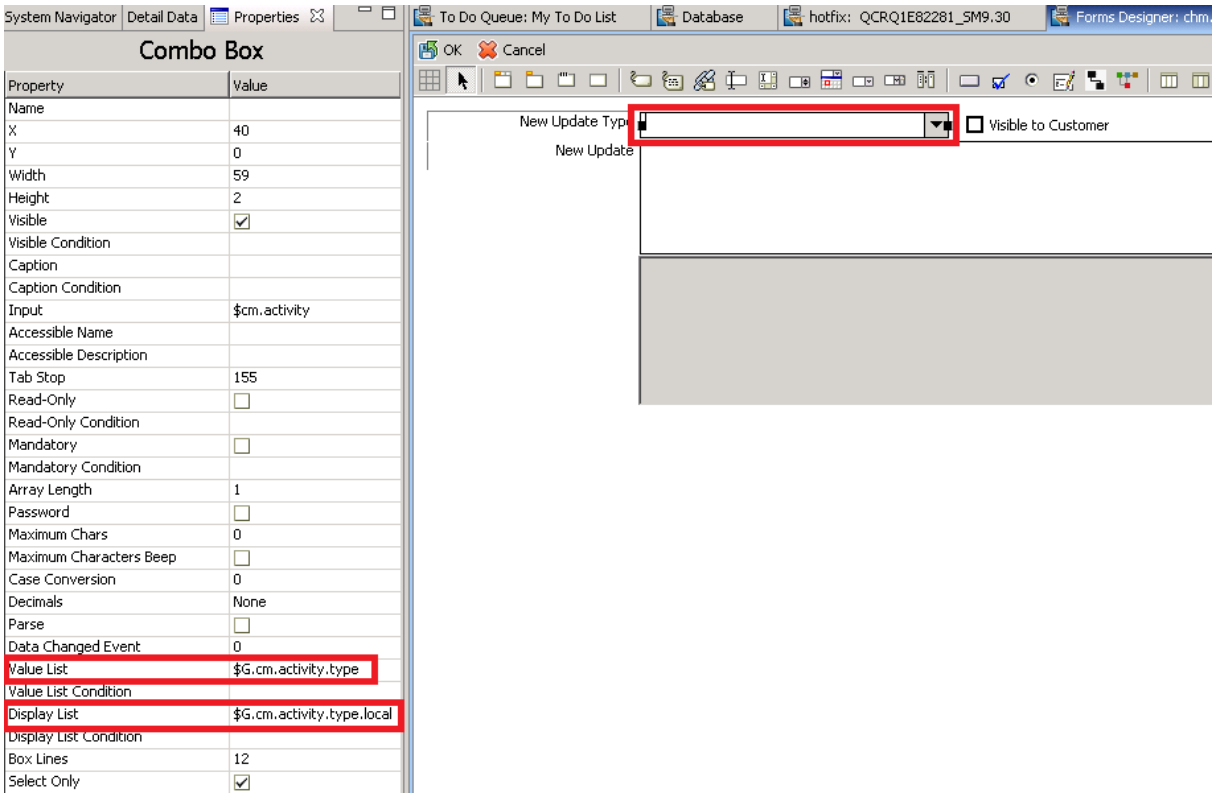
In the following example, the chm.subform.activity form has the **New Update Type** field using the DVD feature as illustrated below:



Since the current version of HP Service Manager Mobile Applications does not support the DVD feature, change the properties of Value List, Value List Condition and Display List as below to avoid using the DVD feature:

Property	Old Value	New Value
Value List	Null	$G.cm.activity.type
Value List Condition	select ("activity.name","activitytype","table","cm3r","visible", "YES")	Null
Display List	Null	$G.cm.activity.type.local

Refer to the following screenshot as an example:


System Navigator
Detail Data
Properties
Combo Box
Property
Value
Name
X
40
Y
0
Width
59
Height
2
Visible
Visible Condition
Caption
Caption Condition
Input
$cm.activity
Accessible Name
Accessible Description
Tab Stop
155
Read-Only
Read-Only Condition
Mandatory
Mandatory Condition
Array Length
1
Password
Maximum Chars
0
Maximum Characters Beep
Case Conversion
0
Decimals
None
Parse
Data Changed Event
0
Value List
$G.cm.activity.type
Value List Condition
Display List
$G.cm.activity.type.local
Display List Condition
Box Lines
12
Select Only
To Do Queue: My To Do List
Database
hotfix: QCRQ1E82281_SM9.30
Forms Designer: chm
OK
Cancel
New Update Typ
New Update
Visible to Customer

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